

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

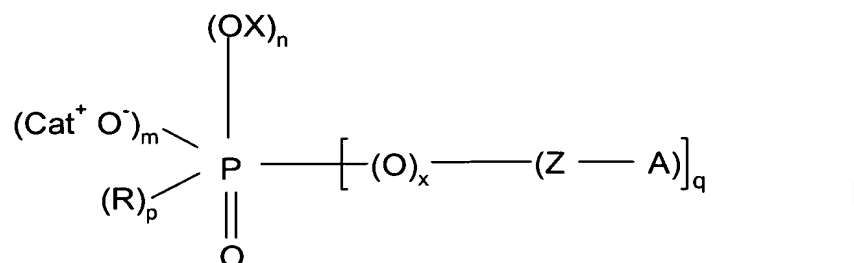
1. (Currently Amended) A composition comprising an organic phosphorous-containing group bonded via an oxygen atom to a metal ~~mineral~~ oxide of at least one element M, the composition being essentially amorphous, comprising an essentially monomolecular layer of an organic group wherein a phosphorous atom of the organic group is directly bonded to an oxygen atom of the metal oxide forming a P-O-M bond, ~~bonded to the mineral oxide via an oxygen atom of the oxide to the phosphorous atom,~~ and the composition being is essentially free of any a phosphate, phosphonate or phosphinate phase of the element M, and the ~~has a~~ ratio of the element M to phosphorus being ~~of about~~ 15:1 - 200:1.

2. (Currently Amended) A composition according to claim 1 comprising, distanced from the phosphorous atom by at least one hydrocarbon group, a sulphur-containing group or a reactive group that can be transformed into a sulphur-containing group, the composition being essentially free of a sulphate phase of the element M.

3. - 9. (Canceled)

10. (Currently Amended) A process for preparing a functionalized material according to claim 1, comprising contacting a suspension of at least one metal ~~mineral~~ oxide of an

element M in a liquid with at least one solution in a solvent of at least one phosphorous-containing compound with formula I:



wherein the sum  $m+n+p+q$  is equal to 3,  $m=0, 1$  or  $2$ ,  $q=0, 1$  or  $2$ ,  $x=0$  or  $1$ ,  $p=0, 1$  or  $2$ , R is a hydrocarbon group, X is a hydrogen atom, a hydrocarbon group or a group with formula  $\text{SiR}''_3$  wherein  $\text{R}''$  is a hydrocarbon group, Z is a hydrocarbon group optionally containing heteroatoms,  $\text{Cat}^+$  is a monovalent cation and A is a sulphur-containing group or a reactive group that can be transformed into a sulphur-containing group, the contact being made under conditions of pressure, temperature and acidity of the medium such that practically no phosphate, phosphonate, phosphinate or sulphate phase of the element M is formed.

**11. (Currently Amended)** A process according to claim 10, wherein a suspension in a liquid of at least one metal mineral oxide of element M is brought into contact with a solution in a solvent of a phosphorous-containing compound with formula I wherein  $\text{Cat}^+$  is a proton  $\text{H}^+$ , R is an alkyl group containing 1 to 18 carbon atoms or an aryl group containing 6 to 18 carbon atoms or an alkylaryl group containing 7 to 24 carbon atoms, X is selected from the group consisting of alkyl groups containing 1 to 18 carbon atoms, aryl groups containing 6 to 18 carbon atoms, alkylaryl groups containing 7 to 24 carbon atoms and groups with formula  $\text{SiR}''_3$  wherein  $\text{R}''$  is a hydrocarbon group, Z is a saturated or unsaturated divalent alkylene alkyl group containing 1 to 18 carbon atoms

or a divalent arylene ~~aryl~~ group containing 6 to 18 carbon atoms or a divalent alkylarylene ~~alkylaryl~~ or arylalkylene ~~arylalkyl~~ group containing 7 to 24 carbon atoms, and A is a sulphur-containing group selected from the group consisting of thiols and derivatives thereof and sulphonic acid groups and derivatives thereof.

**12. - 15. (Canceled)**

**16. (Previously Presented)** A composition according to claim 2, comprising an organic sulphur-containing group selected from the group consisting of thiols and derivatives thereof, and sulphonic acid groups and derivatives thereof.

**17. (Previously Presented)** A composition according to claim 16, wherein the organic sulphur-containing group is selected from the group consisting of a thiol group with formula -SH, a sulphide group with formula -S-R1 wherein R1 is a hydrocarbon residue, and a polysulphide group with formula -(S)<sub>y</sub>-R1, wherein y is a number equal to 2 or more and R1 is a hydrocarbon residue.

**18. (Currently Amended)** A composition according to claim 16, wherein the organic sulphur-containing group is selected from the group consisting of a sulphonic acid group with formula -SO<sub>3</sub>H, organic sulphonate groups with formulae -SO<sub>3</sub>R1 wherein R1 is a hydrocarbon residue, and a metal ~~mineral~~ sulphonate group with formulae -SO<sub>3</sub>(M')<sub>1/t</sub> wherein M' is an element with valency t from the periodic table.

19. (Currently Amended) A composition according to claim 18, wherein the organic sulphur-containing group is the metal ~~mineral~~ sulphonate group of the formulae  $-\text{SO}_3(\text{M}')_{1/t}$  wherein  $\text{M}'$  is an alkali metal.

20. (Currently Amended) A composition according to claim 2, further comprising a hydrocarbon chain of 1-24 carbon atoms connecting ~~bonding~~ the phosphorous-containing group to the sulphur-containing group.

21. (Currently Amended) A composition according to claim 20, wherein the hydrocarbon chain connecting ~~bonding~~ the phosphorous-containing group to the sulphur-containing group is an aromatic chain, an aliphatic chain, or a saturated aliphatic chain.

22. (Currently Amended) A composition according to claim 1, wherein M is an element selected from groups 3 - 14 ~~3 - 4 and 8 - 17~~, the lanthanides and the actinides of the periodic table.

23. (Previously Presented) A composition according to claim 1, wherein M is selected from the group consisting of titanium, zirconium, iron, aluminium, silicon and tin.

24. (Previously Presented) A composition according to claim 23, wherein M is titanium, zirconium or aluminium.

25. (Currently Amended) A process according to claim 10, wherein the phosphorous-containing compound with formula I is a compound wherein Z is a saturated divalent alkylene alkyl group containing 1 to 6 carbon atoms.

26. (Previously Presented) A process according to claim 10, wherein the solvent for the phosphorous-containing compound is selected from the group consisting of tetrahydrofuran, dimethylsulphoxide, dichloromethane and water.

27. (Previously Presented) A process according to claim 10, wherein the phosphorous-containing compound with formula I is a compound wherein  $m=2$ ,  $q=1$  and  $n=p=\text{zero}$ .

28. (Previously Presented) A process according to claim 10, wherein the phosphorous-containing compound with formula I employed is a compound wherein  $n=2$ ,  $q=1$  and  $m=p=\text{zero}$ .

29. (Currently Amended) A composition according to claim 1, wherein the number of phosphorus atoms present in any phase of the composition is less than ~~about~~ 10% of the total number of phosphorus atoms present in the composition.

30. (Previously Presented) A composition according to claim 1, wherein the number of phosphorus atoms present in any phase of the composition is less than about 10% of the total number of phosphorus atoms present in the composition.